

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Currently amended) A method of manufacturing a separator for a solid polymer type fuel cell comprising:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin, and further wherein a ratio of an amount of an epoxy group of said epoxy resin to an amount of a hydroxyl group of said phenolic resin in the raw material is adjusted to a value ranging from 0.8 to 1.2 such that generation of a reaction byproduct gas is minimized;

charging the raw material into a predetermined mold; and

heat press forming the raw material charged into the mold into a ribbed separator at a temperature which is ~~between~~ from 140°C and to 220°C, the ribbed separator thus formed having a property of gas-impermeability.

2. (Canceled)

3. (Previously presented) A method according to claim 1, wherein the epoxy resin comprises a cresol novolac epoxy resin.

4. (Previously presented) A method of manufacturing a separator for a fuel cell comprising:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold; and

heat press forming the raw material charged into the mold,

wherein the epoxy resin comprises a glycidylamine epoxy resin.

5. (Previously presented) A method according to claim 1, wherein the epoxy resin comprises a bixphenol A epoxy resin.
6. (Previously presented) A method according to claim 1, wherein the phenolic resin comprises a novolac phenolic resin.
7. (Previously presented) A method according to claim 1, wherein the phenolic resin comprises a resol phenolic resin.
8. (Original) A method according to claim 1, wherein the carbon comprises a powder formed of scaly natural graphite particles having an average particle size ranging from 5 to 50 μm .
9. (Previously presented) A method of manufacturing a separator for a fuel cell comprising:
preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;
charging the raw material into a predetermined mold; and
heat press forming the raw material charged into the mold;
wherein the step of preparing the raw material includes the substeps of:
 forming the raw material into a slurry; and
 preparing a powder having an average particle size ranging from 50 to 150 μm and a particle size distribution ranging from 50 to 300 μm by spraying and drying the slurry for granulation.
10. (Currently amended) A method of manufacturing a separator for a solid polymer type fuel cell comprising:
 preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;
 charging the raw material into a predetermined ribbed mold;

heat press forming the raw material charged into the mold to form a ribbed separator having a property of gas-impermeability; and

completing manufacture of the separator without baking the separator, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

11. (Original) A method according to claim 1, wherein a ratio of a density of the separator to a theoretical density is at least 93%, wherein the theoretical density is derived from a density of a material constituting the raw material and a component ratio thereof.

12. (Canceled)

13. (Currently amended) A method of manufacturing a separator for a solid polymer type fuel cell comprising:

preparing a raw material by mixing a carbon and a resin;

charging the raw material into a predetermined ribbed mold;

heat press forming the raw material charged into the mold to form a ribbed separator having a property of gas-impermeability; and

completing manufacture of the separator without baking the separator, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

14-17 (Canceled)

18. (Withdrawn) A separator for a fuel cell prepared by a process comprising the steps of:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin, and further wherein

a ratio of an amount of an epoxy group of said epoxy resin to an amount of a hydroxyl group of said phenolic resin in the raw material is adjusted to a value ranging from 0.8 to 1.2 such that generation of a reaction byproduct gas is minimized;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized.

19. (Withdrawn) A separator for a fuel cell prepared by a process comprising the steps of:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic resin, wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized,

wherein the step of preparing the raw material includes the substeps of:

forming the raw material into a slurry; and

preparing a power having an average particle size ranging from 50 to 150 μm and a particle size distribution ranging from 50 to 300 μm by spraying and drying the slurry for granulation.

20. (Withdrawn) A separator for a fuel cell prepared by a process comprising the steps of:

preparing a raw material by mixing a carbon, an epoxy resin and a phenolic

resin, wherein said phenolic resin is different from said epoxy resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the epoxy resin and the phenolic resin are carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.

21. (Withdrawn) A separator for a fuel cell prepared by a process comprising the steps of:

preparing a raw material by mixing a carbon and a resin;

charging the raw material into a predetermined mold;

heat press forming the raw material charged into the mold at a temperature which is equal or less than a temperature at which the resin is carbonized; and

completing manufacture of the separator while maintaining the temperature of the separator equal or less than a temperature at which the resin is carbonized, wherein the completion of manufacture includes grinding a surface of the separator which is brought into contact with an adjacent member to be eliminated when the separator is incorporated into a fuel cell.